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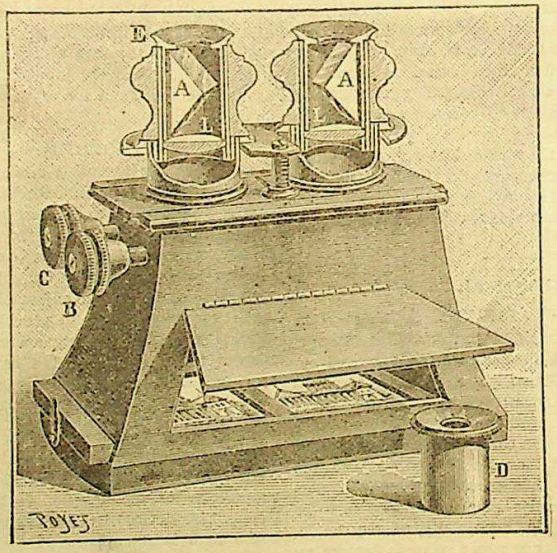
AN INVERTING STEREOSCOPE.

A photographer who, provided with a stereoscopic apparatus, should take it into his head to make a positive upon glass directly by contact with his negative would be much surprised upon afterward looking into his stereoscope to see the foreground transferred to the rear, while the background would come to the front. He would obtain what has been called pseudoscopy. This fact is well known to stereoscope amateurs, who also know that when they print a positive of their negative it is indispensable to put to the right the image that has been obtained to the left, and vice versa. The necessity of such inversion is demonstrated geometrically in taking as a basis an examination of



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two truncated cones; but such demonstration would be too lengthy to reproduce here, and we refer those who desire to make themselves acquainted with it to special treatises.

However it be with theory, the fact is, nevertheless, quite annoying in certain cases. When a print is made upon paper, nothing is simpler, in order to conform to the rule, than to remember that it is necessary to separate the two images and to invert them upon the support upon which they are pasted; but if we print a positive upon glass, there is a slight complication, for it is then necessary either to cut the negative and afterward unite it in the proper direction or else make use of a special frame (of which there are several models) that permits of doing the printing in two operations, but without cutting anything. Now, stereoscopic views upon glass are from every point of view preferable to those upon paper, and tend to become more and more popular among amateurs.

Messrs. Carpentier & Gaumont have very recently constructed a style of stereoscope that permits of seeing the normal relief without making the inversion. To this effect, they utilize two small total reflection prisms, A, which they place in front of the lenses of the apparatus, as shown in the accompanying figure.

We know, in fact, that when we look through a prism of this kind in holding the hypotenuse face in a plane at right angles with that of the image, the latter is inverted, the right is transferred to the left, and vice versa. Now, to thus invert every image in place gives the same result as if one were shifted with respect to the other, provided, however, that we operate upon the wrong side of the image, without which the objects would not be found in their true direction, and, in case there were inscriptions, the latter, being likewise inverted, would become illegible. As it is a question here of transparent views only, there is no inconvenience in placing them wrong side up in the stereoscope.

It may be objected that with such a system it would be no longer possible to examine the views made up to the present and in which account has been taken of the necessity of transposing the images. But the manufacturers have anticipated this and have taken care to mount the prisms in a small tube which slides by slight friction in the piece, E, so that it is very easy to remove them (as seen at D) and then have an ordinary stereoscope. The focusing and the spacing of the objectives is effected by means of the buttons, B and C.

This new type of apparatus will contribute toward the dissemination of a taste for stereoscopic photography among amateurs, who have often been discouraged by the often inconvenient manipulation of which we have spoken.

It is now several years ago that Mr. Drouin conceived the idea of applying this principle of prisms for placing the stereoscopic image in its true direction in examining it upon the ground glass of the camera. To this effect, the operator provides himself with two small total reflection prisms mounted upon a jointed support, and, when he is under the black veil, he can obtain an exact idea of the effect that will be produced and find out what is the best position to give the objectives in order to obtain the maximum of relief.—La Nature.

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